

NAME OF PRESENTING AUTHOR: Deepika Dokuru

EMAIL ADDRESS OF PRESENTING AUTHOR: Deepika.dokuru@colorado.edu

LOCATION OF PRESENTING AUTHOR: America (North)

TIME ZONE OF PRESENTING AUTHOR: USA Mountain

TYPE OF SUBMISSION: Poster

MEMBER STATUS: Associate

ELIGIBLE FOR THOMPSON AWARD: Yes/No

ELIGIBLE FOR ROWEWARD: Yes/No

TITLE: General Factor Model of Substance Use Co-morbidity

FULL AUTHOR LIST: Deepika R Dokuru¹, Maia Frieser¹, John K Hewitt¹, Michael C Stallings¹

AFFILIATIONS: ¹ Department of Psychology and Neuroscience, and Institute for Behavioral Genetics, University of Colorado Boulder, USA

KEYWORDS: substance use, comorbidity, genetic etiology, twins

ABSTRACT:

Abstracts are limited to 250 words, including citations. Please note that citations must be given for references cited in the abstract.

While the high rate of comorbidity among substance use disorders is well described, its detailed etiology is mostly unknown. Prior work by Vrieze et. al (2012) explored the longitudinal influence of environmental and genetic factors on a common factor underlying dependence symptom counts for tobacco, alcohol, and cannabis in twins. They found that a general factor had the greatest influence on substance dependence symptoms in adolescence but decreased over time with substance-specific influences increasing in adulthood. We set forth to replicate and expand their analysis by incorporating other substances along with alcohol, tobacco, and cannabis. We used data from the Colorado longitudinal twin studies (N=2,884). The samples were assessed at three waves with mean ages of 14.99, 20.05, and 25.51 respectively. Analyses utilized transformed (ordinal) DSM dependence counts for tobacco, alcohol and cannabis. Dependence symptom counts for other substances were pooled and the maximum dependence count was used. Consistent with Vrieze et al., a phenotypic confirmatory factor analysis (CFA) indicated that the common latent factor shows the highest common loadings for all substances at wave 1 (adolescence). Common factor loadings decrease

and specific loadings increase overtime. Analyses are being extended to explore sex-limitation and common pathway ACE models to investigate the genetic and environmental factor structure over time.

Vrieze, S. I., Hicks, B. M., Iacono, W. G., & McGue, M. (2012). Decline in genetic influence on the co-occurrence of alcohol, marijuana, and nicotine dependence symptoms from age 14 to 29. *The American Journal of Psychiatry*, 169(10), 1073–1081.
<https://doi.org/10.1176/appi.ajp.2012.11081268>

GRANT SUPPORT: P50 DA011015, T32DA017637
